ATTACHMENT B

VISUAL SITE ~~INSPECTION SUMMARY AND~~ PHOTOGRAPHS

Photograph No. 1 **Location:** SWMU 1
Orientation: North **Date:** 06/25/91
Description: The pad is constructed of reinforced concrete and is surrounded by a 7-foot-high steel-wire fence, which is always locked. The pad also has a 4-inch-high concrete curbing.

Photograph No. 2 **Location:** SWMU 2
Orientation: Northwest **Date:** 06/25/91
Description: The pad is constructed of reinforced concrete and is surrounded by a 6-foot-high steel-wire fence, which is always locked. The pad also has a 4-inch-high concrete curbing.

Photograph No. 3 **Location:** SWMU 3
Orientation: South **Date:** 06/25/91
Description: The former location of Pad C. The unit has not been used since 1982 and is a concrete pad with no curbing, containment, or fence.

Photograph No. 4 **Location:** SWMU 4
Orientation: West **Date:** 06/25/91
Description: Former location of Tank D. The tank and its contents were removed in 1990. Currently on location are the concrete support columns for the tank. Building 7 is in the background.

Photograph No. 5
Orientation: Southeast to northeast
Description: The flue area is currently a paved parking lot.

Location: SWMU 5
Date: 06/25/91

Photograph No. 6 **Location:** West of SWMU 5
Orientation: West **Date:** 06/25/91
Description: The sump system on the western side of the flue area (SWMU 5). The sump system is used to control any fluid accumulation in the flue area due to precipitation and surface water that infiltrated the surface of the parking lot.

Photograph No. 7 **Location:** West of SWMU 5
Orientation: Inside the sump system **Date:** 06/25/91
Description: The 24-inch-diameter corrugated pipe inside the sump system. A 2-inch-diameter PVC pipe is located within the corrugated pipe and discharges the collected liquid to the sanitary sewer. A pump with a float trigger draws the liquid out of the sump when the fluid reaches a certain level with the corrugated pipe.

Photograph No. 8 **Location:** SWMU 6
Orientation: Southeast **Date:** 06/25/91
Description: The former landfill area is graded and covered with grass. No stress vegetation is observed.

Photograph No. 9 **Location:** SWMU 7
Orientation: West **Date:** 06/25/91
Description: Part of the incinerator area is covered with vegetation and part of the area is on barren ground. The former landfill area (SWMU 6) is in the background.

Photograph No. 10 **Location:** SWMU 8
Orientation: North **Date:** 06/25/91
Description: Beneath the chute in the foreground is the concrete vault (SWMU 8) that stored the boron nitride particulates from the boron nitride process. Hazardous waste storage Pad B is in the upper right-hand corner of the photo.

Photograph No. 11 **Location:** SWMU 9
Orientation: East **Date:** 06/25/91
Description: Beneath the steel lid is the concrete vault (SWMU 9) that stored the graphite and carbon dust from the wet machining process.

Photograph No. 12 **Location:** SWMU 10
Orientation: West **Date:** 06/25/91
Description: The former used oil and empty drum storage area is on a concrete pad, surrounded by three brick walls and covered by a metal sheet. The whole area is separated into three smaller areas by two brick walls. Each area has two metal doors and has a 4-inch curbing. The former landfill area (SWMU 6) is at the back. The area is used to store raw materials.

Photograph No. 13 **Location:** SWMU 10
Orientation: East **Date:** 06/25/91
Description: The back side of the former oil and empty drum storage area.

Photograph No. 14 **Location:** SWMU 11
Orientation: North **Date:** 06/25/91
Description: Scrap metals from various activities in the facility pile up on barren ground.

Photograph No. 15 **Location:** SWMU 12
Orientation: East **Date:** 06/25/91
Description: Tank 1 (10,000 gallons) of the Grafoil process neutralization system. The tank is on a concrete floor surrounded by concrete walls. Building 10 is in the background.

Photograph No. 16 **Location:** SWMU 12
Orientation: East **Date:** 06/25/91
Description: The sump for the first tank of the Grafoil process neutralization system. It is located in the northeastern corner inside the concrete wall for the tank.

Photograph No. 17 **Location:** SWMU 12
Orientation: West **Date:** 06/25/91
Description: The yellow hopper in the foreground collects the sludge from the neutralization tanks. The sludge is then moved to the landfill hopper (SWMU) before being hauled offsite to a landfill. Neutralization tanks 2 and 3 are in the background to the right.

Photograph No. 18 **Location:** SWMU 14
Orientation: West **Date:** 06/25/91
Description: Tank 1 of the CVD neutralization system underneath the steel plate. Sodium hydroxide feed is on the right and pH meter is on the wall. Tanks 2 and 3 are underneath the steel gratings in the upper right portion of the photograph.

Photograph No. 19 **Location:** SWMU 14
Orientation: West **Date:** 06/25/91
Description: Beneath the steel gratings are tanks 2 and 3. Wastewater from tank 3 flows to the sewage.

Photograph No. 20 **Location:** SWMU 15
Orientation: South **Date:** 06/25/91
Description: The area where the landfill hopper is located. The landfill hopper was not onsite during the PA/VSI. Graphite flakes were observed on the ground.

Photograph No. 21 **Location:** SWMU 13
Orientation: South **Date:** 06/25/91
Description: The tank is located on a concrete floor on the ground floor of Building 10. The 1,100-gallon tank is made of fiberglass. In the foreground is a cart that collects the sludge from the neutralization tank. The sludge is moved to the landfill hopper (SWMU 15) before it is hauled offsite to a landfill. On the wall on the right is a pH meter that monitors the wastewater before it is discharged to the sewage.

Photograph No. 22 **Location:** SWMU 16
Orientation: West **Date:** 06/25/91
Description: One of the 12 dust collectors for the boron nitride process. This dust collector is located on the fourth floor of Building 10. The dust collected in the drums under dust collectors may be for recycle, or may be moved to the landfill hopper (SWMU 15) to be disposed offsite.

Photograph No. 23 **Location:** SWMU 16
Orientation: North **Date:** 06/25/91
Description: Dust collector for the intermetallic boron nitride process. The drum under the dust collector is on a concrete pad, and the dust is moved to the landfill hopper (SWMU 15) for disposal.

Photograph No. 24 **Location:** SWMU 17
Orientation: West **Date:** 06/25/91
Description: The area is inside Building 10 on a concrete floor. The drum on the left is empty and the drum on the right, with a chain around it, is partially filled with spent methanol. Once the drum is filled, it is moved to the hazardous waste storage Pad A (SWMU 1). The two drums are connected to wires for grounding purpose.

CERTIFICATION REGARDING POTENTIAL RELEASES FROM
SOLID WASTE MANAGEMENT UNITS

FACILITY NAME: Union Carbide Corporation - Electronics Division

EPA I.D. NUMBER: OHD004167383

LOCATION CITY: Cleveland

STATE: Ohio

1. Are there any of the following solid waste management units (existing or closed) at your facility? NOTE - DO NOT INCLUDE HAZARDOUS WASTE UNITS CURRENTLY SHOWN IN YOUR PART A APPLICATION

	YES	NO
° Landfill	X	
° Surface Impoundment		X
° Land Farm		X
° Waste Pile		X
° Incinerator		X
° Storage Tank (Above Ground)		X
° Storage Tank (Underground)		X
° Container Storage Area		X
° Injection Wells		X
° Wastewater Treatment Units		X
° Transfer Stations		X
° Waste Recycling Operations		X
° Waste Treatment, Detoxification		X
° Other Past Storage Area (Underground-for liquids)		X

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular, please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volume of wastes disposed of and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions and location at facility. Provide a site plan if available.

See Attachment 'A'

NOTE: Hazardous wastes are those identified in 40 CFR 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and also those hazardous waste units in your Part A application, please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or may still be occurring.

   Please provide the following information

   a. Date of release
   b. Type of waste released
   c. Quantity or volume of waste released
   d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

   We have data regarding the presence of some parameters in groundwater near the landfill and storage area. These data may or may not indicate a release of hazardous constituents from the landfill or storage area. We have no data regarding groundwater monitoring since 1984.

4. In regard to the prior or continuing releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or groundwater.

   See Attachment 'B'

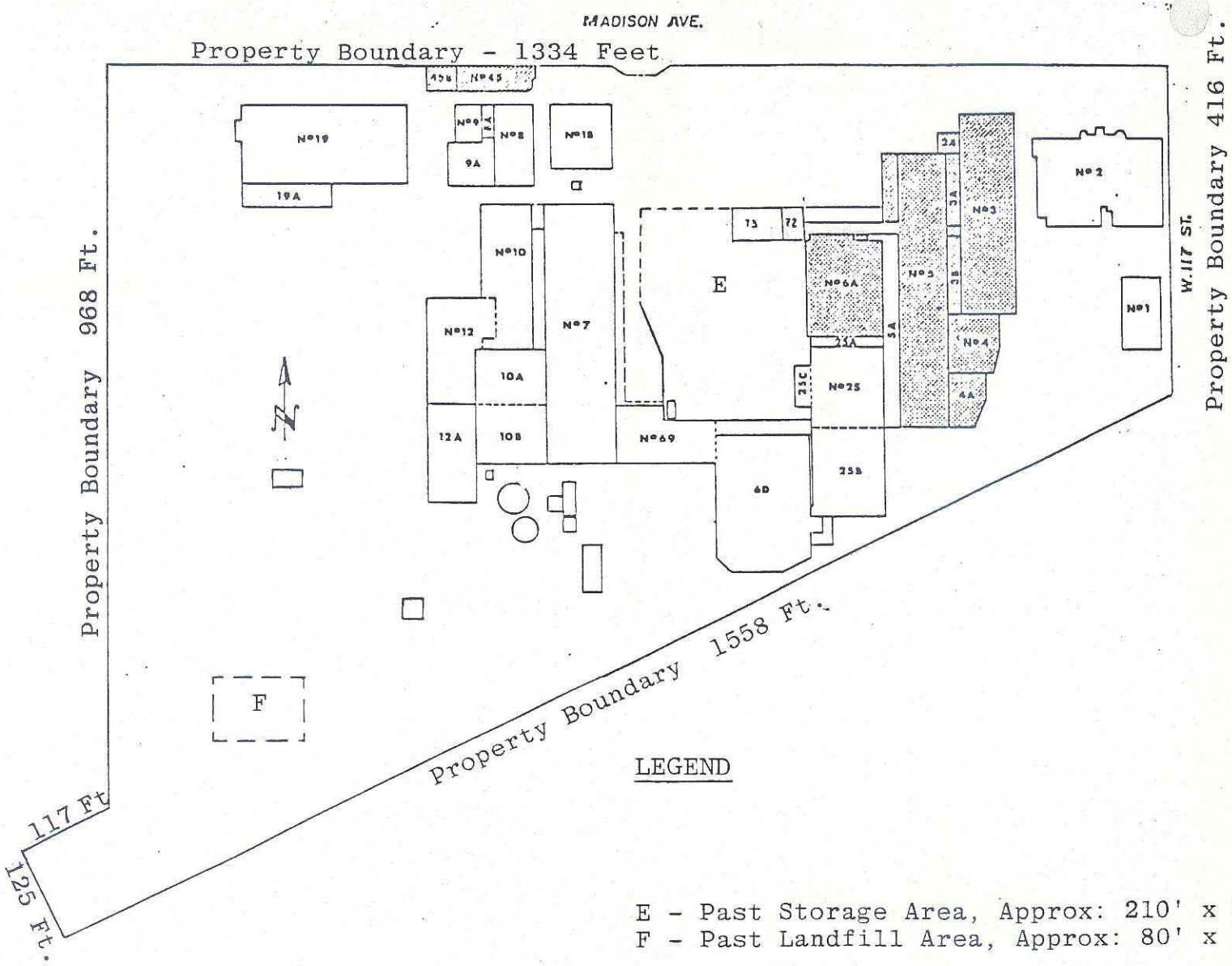
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (42 U.S.C. 6902 et seq. and 40 CFR 270.11(d))

Edwin E. Frye, Jr.
Chief Plant Engineer

Typed Name and Title

Edwin C. Frye, Jr.
Signature

March 14, 1986
Date



E - Past Storage Area, Approx: 210' x 270'
F - Past Landfill Area, Approx: 80' x 113'

Union Carbide Corporation
Electronics Division
EPA I.D. # OHD004167383

NOTE:
1. Entire property is bounded by chain link fence.
2. Scale: 1 inch = 200 feet

ATTACHMENT 'A'

The Following Data Pertains to Question #2
Regarding Disposition of Material Into Solid Waste Management Units

Solid Waste Mgmt Unit	Type Waste Involved	RCRA Hazardous Waste or Constituents	Quantity or Volume	Dates of Disposal	Description of Solid Waste Management Unit
1. Landfill	a) Barium-Aluminum compounds as well as Barium Oxide. All materials were in powdered aggregate form.	Hazardous Constituents 1) Barium compounds	Estimated average annual quantity: 1929 to 1950 approx.3200 lbs/yr 1950 to 1980 approx.7500 lbs/yr Material was physically removed by an outside contractor on two occasions, estimted to be mid-to-late 1960s.	This landfill operation started approximately late 1920s-early 1930s and was a repository for scrap graphite and other rubble. The operation was terminated in late 1973 or early 1974 and was contoured. It is currently unused vacant land.	General landfill area - designated as area 'F' on Part 'A' application. Approximate dimensions of 80' x 113'.
2. Past Storage Area	Waste resin solutions	Constituents 1. Acetone 2. Phenol-Formaldehyde Compounds	Estimated average annual quantity approximately 5,000 to 10,000 gallons.	Approximately 1957 to 1976 waste resin solutions & aqueous dilutions of same were temporarily stored here. These solutions along with rainwater were periodically pumped out.	Underground abandoned furnace flues (brick lined) encompassing an area approximately 210 ft X 270 ft - designated as area 'E' on Part 'A' Application.

EEF/ar 03/15/86/CER

ATTACHMENT 'B'

The Following Data Pertains to Question #4

Analytical Data (Note: (1) All Data is Shown In Mg/Liter)
(2) *Indicates - Less Than

Solid Waste Mgmt Unit	Year	Test Well	Lead	Copper	Chromium	Zinc	Barium	Aluminum	Nickel	B.O.D.	C.O.D.	Cyanide	Phenol	Oil & Grease
1. Landfill	1979	5-2	-	*0.1	*0.1	*0.1	*0.1	0.1	*0.1	1	355	0.001	0.016	* 0.01
		5-3	*0.1	0.4	*0.1	*0.1	*0.1	0.4	*0.1	2	322	0.001	0.013	* 0.01
		5-4	-	-	-	-	*0.1	*0.1	-	240	12600	-	0.029	-
	1981	5-4	-	-	-	-	0.06	-	-	3	95	-	0.040	-
	1984	5-2	0.09	0.06	-	0.16	0.35	-	0.05	17	112	-	0.005	12
		5-3	3.74	24.30	-	12.50	5.30	-	1.48	54	206	-	0.010	18
		5-4	0.13	0.18	-	0.39	0.56	-	0.05	14	90	-	0.005	13
2. Past Storage Area (Underground-For Liquids)	1979	2-1	*0.01	0.5	0.5	0.6	*0.1	3.5	*0.1	14	105	.001	1.01	* 0.01
		2-2	*0.1	*0.1	0.2	0.7	1.0	2.6	*0.1	18235	18100	.009	1100.	* 0.01
		2-3	-	-	-	-	*0.1	10.2	-	24	128	-	.025	-
		2-4A	-	-	-	-	*0.1	62.4	-	11	128	-	.044	-
		2-4B	-	-	-	-	*0.1	3.0	-	88	139	-	11.9	-
		2-4C	-	-	-	-	-	-	-	-	-	-	-	-
		2-5	-	-	-	-	*0.1	22.8	-	89	442	-	8.9	-
		2-6	-	-	-	-	*0.1	5.7	-	10	135	-	0.024	-
	1980	2-1	0.14	0.2	*0.1	0.1	2.1	0.61	0.06	3	7500	.001	0.008	0.014
		2-2	0.22	1.0	0.04	27.4	*0.01	25.47	0.31	50	2050	*.001	399.	5.66
		2-5	0.07	0.2	0.01	*0.01	9.5	0.82	0.09	6	9600	.003	336.	-
		2-6	0.10	0.7	0.6	2.7	0.6	3.58	0.06	159	85	.001	.82	0.20
	1981	2-5	0.05	-	0.01	-	0.06	-	-	-	-	-	-	-
	1983	2-2	0.06	0.03	-	0.31	0.12	-	0.04	1520	3721	-	.04	8.0
		Crock	0.07	-	-	-	0.60	-	-	1736	4341	-	.063	-
	1984	2-1	0.06	0.02	-	0.17	0.18	-	0.03	6.6	35.2	-	.06	11.5
		2-2	0.11	0.09	-	0.21	0.14	-	*0.01	50.8	221	-	.33	12.5
		2-3	0.09	0.15	-	0.46	*0.01	-	0.13	34.0	153	-	*.001	10.0
		2-4A	Dry	Dry	-	Dry	Dry	-	Dry	Dry	Dry	-	Dry	Dry
		2-4B	0.11	0.03	-	0.68	*0.01	-	0.09	62.0	315	-	.76	7.0
		2-4C	Dry	Dry	-	Dry	Dry	-	Dry	Dry	Dry	-	Dry	Dry
		2-5	0.35	0.3	-	0.53	*0.01	-	0.08	48.0	212	-	*.001	10.0
		2-6	0.28	0.23	-	0.41	0.07	-	0.04	30.0	97	-	*.001	10.0
		Crock	0.13	-	-	-	0.56	-	-	35.5	677	-	.8	-

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